

## MODEL R0 & R0\_FG\* - 0 Degree Return Performance Data

Nominal Size		Core Vel,FPM	200	300	400	500	600	700	800	900	1000	1200
W	H	Ps, IWG	-0.01	-0.01	-0.02	-0.03	-0.05	-0.06	-0.08	-0.10	-0.13	-0.18
Width	Height											
6"	6"	CFM	30	50	70	80	100	120	130	150	170	200
		NC	<20	<20	<20	<20	<20	<20	<20	20	23	28
8"	8"	CFM	70	100	130	160	200	230	260	300	330	390
		NC	<20	<20	<20	<20	<20	<20	<20	23	26	31
12"	6"	CFM	70	110	150	180	220	260	290	330	370	440
		NC	<20	<20	<20	<20	<20	<20	20	23	26	32
10"	10"	CFM	110	160	220	270	330	380	440	490	550	660
		NC	<20	<20	<20	<20	<20	<20	22	25	28	33
18"	6"	CFM	110	170	230	290	340	400	460	510	570	690
		NC	<20	<20	<20	<20	<20	<20	22	25	28	34
12"	12"	CFM	160	250	330	410	490	570	660	740	820	990
		NC	<20	<20	<20	<20	<20	20	23	27	30	35
14"	14"	CFM	230	350	460	580	690	810	920	1,040	1,150	1,380
		NC	<20	<20	<20	<20	<20	21	25	28	31	37
18"	12"	CFM	250	380	510	640	760	890	1,020	1,150	1,270	1,530
		NC	<20	<20	<20	<20	<20	21	25	29	32	37
24"	10"	CFM	280	420	560	700	850	990	1,130	1,270	1,410	1,690
		NC	<20	<20	<20	<20	<20	22	26	29	32	37
24"	12"	CFM	350	520	690	860	1,040	1,210	1,380	1,550	1,730	2,070
		NC	<20	<20	<20	<20	<20	23	27	30	33	38
30"	12"	CFM	440	650	870	1,090	1,310	1,530	1,740	1,960	2,180	2,620
		NC	<20	<20	<20	<20	<20	24	28	31	34	39
24"	24"	CFM	730	1,090	1,450	1,820	2,180	2,540	2,910	3,270	3,630	4,360
		NC	<20	<20	<20	<20	22	26	30	33	36	42
30"	30"	CFM	1,160	1,740	2,320	2,900	3,470	4,050	4,630	5,210	5,790	6,950
		NC	<20	<20	<20	<20	24	28	32	35	38	44
48"	24"	CFM	1,490	2,230	2,980	3,720	4,470	5,210	5,960	6,700	7,450	8,940
		NC	<20	<20	<20	<20	25	29	33	36	39	45
38"	38"	CFM	1,890	2,830	3,780	4,720	5,670	6,610	7,550	8,500	9,440	11,330
		NC	<20	<20	<20	20	26	30	34	37	40	46
48"	36"	CFM	2,270	3,410	4,540	5,680	6,810	7,950	9,080	10,220	11,350	13,620
		NC	<20	<20	<20	21	26	31	35	38	41	46
48"	42"	CFM	2,660	3,990	5,320	6,650	7,980	9,310	10,640	11,980	13,310	15,970
		NC	<20	<20	<20	22	27	32	35	39	42	47
48"	48"	CFM	3,050	4,580	6,100	7,630	9,160	10,680	12,210	13,730	15,260	18,310
		NC	<20	<20	<20	23	28	32	36	39	43	48

**-Ps - Static Pressure Drop, I.W.G.**

**-Data determined in accordance with ASHRAE Standard 70-91**

**-NC noise criteria based on room attenuation of 10 dB, re:10-12 watts**

**\* Performance shown excludes the effects of the filter.**



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## MODEL R45 & R45\_FG\* - 45 Degree Return Performance Data

Nominal Size		Core Vel,FPM	200	300	400	500	600	700	800	900	1000	1200
W	H	Ps, IWG	-0.01	-0.02	-0.03	-0.05	-0.07	-0.09	-0.12	-0.15	-0.19	-0.27
Width	Height											
6"	6"	CFM	30	50	70	80	100	120	130	150	170	200
		NC	<20	<20	<20	20	21	23	24	26	27	28
8"	8"	CFM	70	100	130	160	200	230	260	300	330	390
		NC	<20	<20	20	23	24	26	27	29	30	31
12"	6"	CFM	70	110	150	180	220	260	290	330	370	440
		NC	<20	<20	21	23	25	27	28	29	30	32
10"	10"	CFM	110	160	220	270	330	380	440	490	550	660
		NC	<20	20	23	25	27	28	30	31	32	34
18"	6"	CFM	110	170	230	290	340	400	460	510	570	690
		NC	<20	20	23	25	27	28	30	31	32	34
12"	12"	CFM	160	250	330	410	490	570	660	740	820	990
		NC	<20	21	24	27	28	30	31	33	34	35
14"	14"	CFM	230	350	460	580	690	810	920	1,040	1,150	1,380
		NC	<20	23	26	28	30	31	33	34	35	37
18"	12"	CFM	250	380	510	640	760	890	1,020	1,150	1,270	1,530
		NC	<20	23	26	28	30	32	33	34	35	37
24"	10"	CFM	280	420	560	700	850	990	1,130	1,270	1,410	1,690
		NC	20	24	27	29	31	32	34	35	36	38
24"	12"	CFM	350	520	690	860	1,040	1,210	1,380	1,550	1,730	2,070
		NC	21	25	28	30	32	33	35	36	37	39
30"	12"	CFM	440	650	870	1,090	1,310	1,530	1,740	1,960	2,180	2,620
		NC	22	26	29	31	33	34	36	37	38	40
24"	24"	CFM	730	1,090	1,450	1,820	2,180	2,540	2,910	3,270	3,630	4,360
		NC	24	28	31	33	35	36	38	39	40	42
30"	30"	CFM	1,160	1,740	2,320	2,900	3,470	4,050	4,630	5,210	5,790	6,950
		NC	26	30	33	35	37	38	40	41	42	44
48"	24"	CFM	1,490	2,230	2,980	3,720	4,470	5,210	5,960	6,700	7,450	8,940
		NC	27	31	34	36	38	40	41	42	43	45
38"	38"	CFM	1,890	2,830	3,780	4,720	5,670	6,610	7,550	8,500	9,440	11,330
		NC	28	32	35	37	39	41	42	43	44	46
48"	36"	CFM	2,270	3,410	4,540	5,680	6,810	7,950	9,080	10,220	11,350	13,620
		NC	29	33	36	38	40	41	43	44	45	47
48"	42"	CFM	2,660	3,990	5,320	6,650	7,980	9,310	10,640	11,980	13,310	15,970
		NC	29	34	36	39	41	42	43	45	46	48
48"	48"	CFM	3,050	4,580	6,100	7,630	9,160	10,680	12,210	13,730	15,260	18,310
		NC	30	34	37	39	41	43	44	45	46	48

**-Ps - Static Pressure Drop, I.W.G.**

**-Data determined in accordance with ASHRAE Standard 70-91**

**-NC noise criteria based on room attenuation of 10 dB, re:10-12 watts**

**\* Performance shown excludes the effects of the filter.**



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# MODEL 1AV, 1AH, 2AV, 2AH w/ Dampers / Supply Register Performance Data

Duct Size		Core Area Sq. Ft.	Core Velocity Ps	Core Velocity																														
Nom Width W	Nom Height H			200	300	400	500	600	700	800	900	1000	1200																					
6"	6"	0.17	0	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.17																					
				22.5	0.01	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.20																				
				45	0.01	0.02	0.04	0.06	0.08	0.11	0.15	0.18	0.23	0.33																				
				CFM	30	50	70	80	100	120	130	150	170	200																				
8"	8"	0.33	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	2	4	8	5	7	13	7	10	15	7	11	16	9	13	18	11	14	20	12	15	21	13	16	23	14	17	24	15	18	26
				45	1	2	4	2	3	6	3	5	7	3	5	7	4	6	8	5	6	9	5	7	9	6	7	10	6	8	11	7	8	12
				CFM	70	100	130	160	200	230	260	300	330	390																				
12"	8"	0.52	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	4	6	12	6	10	18	9	13	21	11	16	23	12	18	25	15	19	27	17	21	29	18	22	31	19	23	33	20	25	36
				45	2	4	7	4	6	10	5	8	12	6	9	14	7	10	14	9	11	16	10	12	17	10	13	18	11	14	19	12	14	21
				CFM	100	160	210	260	310	360	420	470	520	620																				
12"	12"	0.82	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	5	8	15	8	12	22	11	16	26	13	20	37	16	22	35	19	24	34	22	27	39	23	29	41	26	32	45			
				45	3	5	9	5	7	13	6	9	15	8	12	17	9	13	18	11	14	20	13	15	21	13	16	23	14	17	24	15	18	26
				CFM	160	250	330	410	490	570	660	740	820	990																				
18"	10"	1.04	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	6	9	18	9	13	25	12	18	29	15	22	33	18	25	36	21	27	39	24	29	41	26	31	43	26	33	46	29	36	50
				45	4	5	10	5	8	14	7	10	17	9	13	19	10	14	21	12	16	23	14	17	24	15	18	25	15	19	27	17	21	29
				CFM	210	310	420	520	620	730	830	940	1040	1250																				
16"	16"	1.54	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	7	11	22	11	16	30	15	22	35	19	27	39	22	30	43	26	33	46	29	36	50	30	37	53	33	39	56	36	43	61
				45	4	6	13	6	9	18	9	13	20	11	16	23	12	18	25	15	19	27	17	21	29	18	22	31	19	23	32	21	25	36
				CFM	310	460	610	770	920	1080	1230	1380	1540	1840																				
24"	14"	2.05	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	9	12	26	12	19	35	17	26	41	21	32	46	26	36	50	29	38	54	34	41	57	36	43	61	37	46	64	41	50	71
				45	5	7	15	7	11	20	10	15	24	12	18	27	15	21	29	17	22	32	20	24	33	21	25	36	22	27	37	24	29	41
				CFM	410	610	820	1020	1230	1430	1640	1840	2050	2450																				
36"	12"	2.63	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	9	15	29	14	22	40	19	29	46	24	36	52	29	40	57	33	43	61	38	46	65	40	49	70	42	52	73	46	57	80
				45	5	9	17	8	13	23	11	17	27	14	21	30	17	23	33	19	25	36	22	27	38	23	28	41	24	30	42	27	33	46
				CFM	610	910	1210	1510	1820	2120	2420	2720	3030	3630																				
22"	22"	3.03	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	10	15	31	15	23	43	20	31	50	26	38	55	31	43	60	36	46	66	41	50	70	43	53	74	45	56	78	50	60	86
				45	6	9	18	9	14	25	12	18	29	15	22	32	18	25	35	21	27	38	24	29	41	25	31	43	26	32	46	29	35	50
				CFM	710	1060	1420	1770	2120	2480	2830	3190	3540	4250																				
48"	12"	3.54	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	11	17	33	16	25	46	22	33	53	28	42	60	33	46	66	39	50	71	44	53	76	46	57	81	49	60	84	53	66	93
				45	6	10	19	9	14	27	13	19	31	16	24	35	19	27	38	23	29	41	26	31	44	27	33	47	28	35	49	31	38	54
				CFM	820	1230	1630	2040	2450	2860	3270	3680	4090	4900																				
36"	18"	4.09	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	12	18	36	18	27	50	24	36	57	29	44	64	36	50	70	42	54	76	47	57	81	50	61	87	53	64	91	57	70	100
				45	7	10	21	10	16	29	14	21	33	17	26	37	21	29	41	24	32	44	27	33	47	29	36	50	31	37	53	33	41	58
				CFM	1160	1740	2320	2900	3470	4050	4630	5210	5790	6950																				
30"	30"	5.79	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	14	21	43	21	32	60	29	43	69	36	53	77	43	60	84	50	64	91	57	68	97	60	73	103	63	77	108	68	84	118
				45	8	12	25	12	18	35	17	25	40	21	31	45	25	35	49	29	37	53	33	40	56	35	42	60	37	45	63	40	49	69
				CFM	1320	1990	2650	3310	3970	4630	5300	5960	6620	7940																				
32"	32"	6.62	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	15	22	45	22	34	63	30	46	74	38	57	82	46	63	90	53	68	97	60	74	104	63	77	110	67	82	116	74	90	127
				45	9	13	26	13	20	37	18	27	43	22	33	48	27	37	52	31	40	56	35	43	60	37	45	64	39	48	68	43	52	74
				CFM	1980	2970	3960	4950	5940	6930	7920	8910	9900	11880																				
42"	36"	9.90	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	19	28	56	28	42	77	37	56	90	46	70	100	56	77	110	65	84	118	74	90	127	77	95	135	82	100	142	90	110	155
				45	11	16	32	16	24	45	22	32	52	27	41	58	32	45	64	38	49	69	43	52	74	45	55	78	48	58	82	52	64	90
				CFM	2320	3480	4640	5800	6960	8120	9280	10440	11600	13920																				
42"	42"	11.60	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	20	30	60	30	45	84	40	60	97	50	75	108	60	84	118	70	91	129	80	97	137	84	103	146	88	108	153	97	118	168
				45	12	18	35	18	26	49	23	35	56	29	44	63	35	49	69	41	53	75	46	56	80	49	60	85	51	63	89	56	69	98
				CFM	2800	4200	5600	6960	8390	9790	11190	12590	13980	16780																				
46"	46"	13.98	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	22	33	66	33	50	92	44	66	106	55	83	119	66	92	130	77	100	141	88	107	150	92	113	159	98	119	168	106	130	184
				45	13	19	38	19	29	54	26	38	62	32	48	69	38	54	76	45	58	82	51	62	87	54	66	93	57	69	98	62	76	107
				CFM	3050	4580	6100	7630	9160	10680	12210	13730	15260	18310																				
48"	48"	15.26	0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20																					
				22.5	23	34	69	35	52	96	46	69	111	57	86	125	69	96	136	81	104	147	92	111	157	96	118	166	101	125	176	111	136	193
				45	14	20	40	20	30	56	27	40	65	33	50	73	40	56	79	47	60	86	54	65	91	56	69	97	59	73	102	65	79	112
				CFM	3050	4580	6100	7630	9160	10680	12210	13730	15260	18310																				

**Notes:**

1. Data determined in accordance with ASHRAE Standard 70-1991.
2. Data is based on double deflection register (with damper open).
3. See Adjustment Factors for single deflection and grille performance.
4. 0, 22-1/2, 45 degree are front vertical blade settings for horizontal spread, rear blades at 0 degree.
5. Ps - Static Pressure, inches w.g.
6. Throw - distance, in feet, to terminal velocities Vt = 150,10